Remarks

Upon entry of the foregoing amendment, claims 1, 13, 17-21 and 23-70 will be pending in the instant application. Claims 2-12, 14-16 and 22 have been canceled without prejudice or disclaimer. Applicants reserve the right to pursue the canceled subject matter in continuing applications. Claims 25-70 have been added to claim embodiments that Applicants regard as the invention. Support for the amendments to the specification and claims is found throughout the specification as filed.

More particularly, support for new claims 25-27 and 31-33 can be found, for example, at pages 639, line 1 to page 641, line 16; at page 702, lines 15-29; Table 1A, page 269, row 7 as indicated as "Gene No. 14" of the specification as filed; and original claim 11. Support for new claims 28, 34, 41, 48, 53, 58, 63, and 68 can be found, for example, at page 698, line 26 to page 700, line 21 and Example 9 of the specification as filed. Support for new claims 29, 35, 42, 49, 54, 59, 64, and 69 can be found at page 689, line 23 to page 694, line 6 and Example 23 of the specification as filed. Support for new claims 30, 36, 43, 50, 55, 60, 65, and 70 can be found, for example, at page 700, line 23 to page 702, line 29, and Examples 5 to 8 of the specification as filed. Support for new claims 37-40 and 44-47 can be found, for example, at page 641, line 18 to page 649, line 21, and claim 11 of the specification as filed. Support for new claims 51-52, 56-57, 61-62, and 66-67 can be found, for example, at page 649, line 23 to page 653, line 10 of the specification as filed.

In addition, the title has been amended to more precisely reflect the presently claimed invention, the current status of a priority application has been updated in the first paragraph of the application and a minor typographical error has been corrected in the first paragraph. No new matter has been introduced.

Applicants note that the presently claimed invention, polypeptides encoded by Gene No. 14, is primarily expressed in human macrophages and, to a lesser extent, in dendritic cells and neutrophils (*see* page 58, lines 17-18 of the specification). Applicants also note that it is asserted in the specification that the presently claimed invention is useful for the diagnosis of diseases and conditions which include, but are not limited to, immunologically mediated disorders and inflammation. *See* page 58, lines 19-22 and page 457 of the specification.

In addition, Applicants respectfully assert that the claimed invention fully complies with the requirements of 35 U.S.C. §§ 101 and 102. In particular, Applicants have asserted that the claimed polypeptides are useful, for example, in the diagnosis (*i.e.*, as a diagnostic marker)

and/or treatment of immune system disorders and inflammation. *See, supra.* These assertions of utility are specific, substantial and credible.

Moreover, Applicants point out that the credibility of the asserted utilities is further supported by data published after the effective filing date of the captioned application for a polypeptide (referred to as DAP12 or TYROBP) which shares greater than 98% identity to the polypeptide of SEQ ID NO:164. *See*, Lanier *et al.* (1998) (submitted herewith in the Information Disclosure Statement as reference AB, in particular Figure 1A). Data in reference AA supports the Applicants' assertion of expression as DAP12 is predominantly expressed in peripheral blood mononuclear cells, dendritic cells, peripheral blood monocytes and NK cells lines. *See*, Lanier *et al.* (1998), page 704, second column. In addition, data from Lucas *et al.* (2002) and Bakker et al. (2000) (submitted herewith in the Information Disclosure Statement as references AC and AD respectively) further support the asserted utility of the claimed polypeptide HHTLF25. For example, the references disclose that overexpression of DAP12 results in severe lymphopenia and inflammation (*see*, Lucas *et al.* (2002), entire document) while loss of DAP12 function results in a diminished autoimmune response (*see*, Bakker *et al.* (2000), page 349, Figure 4). Therefore, the claimed polypeptide would be useful to treat and/or diagnose immune system mediated disorders and inflammation. Thus, independent, third party research entities have confirmed the Applicants' credible, specific and substantial asserted utilities.

Provisional Election With Traverse

Claims 2-12, 14-16 and 22 have been canceled without prejudice or disclaimer.

The Examiner has required an election under 35 U.S.C. § 121 of one of ten groups cast by the Examiner. The Examiner contends that the individual groupings are distinct, each from each other.

Preliminarily, Applicants point out that new claims 25-29, 31-35, 37-42, 44-49, 51-54, 56-59, 61-64, and 66-69 fall within the domain of Group II as cast by the Examiner.

In order to be fully responsive, Applicants hereby provisionally elect, *with traverse*, the invention of Group II, drawn to polypeptides, represented by new claims 25-29, 31-35, 37-42, 44-49, 51-54, 56-59, 61-64, and 66-69.

Moreover, in order to be fully responsive, Applicants hereby elect sequences corresponding to polypeptides encoded by the deposited HHTLF25 cDNA and/or that having an

amino acid sequence disclosed in SEQ ID NO:164. New claims 25-70 read on the elected sequences.

With respect to the Examiner's division of the invention into ten groups and the reasons stated therefor, Applicants respectfully traverse.

Applicants point out, that even where patentably distinct inventions appear in a single application, restriction remains improper unless the examiner can show that the search and examination of these groups would entail a "serious burden". (*See* M.P.E.P. § 803.) In the present situation, the Examiner has failed to make such a showing.

Applicants submit that a search of polynucleotide claims of the invention would provide useful information for examining claims directed to both polynucleotides and the polypeptides encoded by these polynucleotides. In certain of the claims this is especially true because the polynucleotide sequence of these claims is defined in part by the polypeptide that the polynucleotide sequence encodes. Further, Applicants point out that, in many if not most publications, where a published nucleotide sequence is an open reading frame, the authors also include, as a matter of routine, the deduced amino acid sequence of the encoded polypeptide. *See*, for example, Figure 1A of Reference AB submitted herewith in PTO/SB/08.

Similarly, a search of the polypeptide claims of the invention would clearly provide useful information for the examination of claims directed to antibodies either produced in response to or having affinity for the subject polypeptides. This is because antibodies are frequently defined by the antigens that they are produced in response to and the epitopes to which they bind. Moreover, in many publications where an antibody is described, the antigen that it was produced in response to is also described.

Further, searches of publications directed to polynucleotides and the use of those polynucleotides would clearly be overlapping. This is so because in many, if not most, publications which describe polynucleotides, these molecules are described by their function, characterization and/or expression profile. Thus, a search of polynucleotide claims would also provide the Examiner with art directed to the manner in which the claimed polynucleotides could be used in diagnostic and therapeutic indications.

Moreover, searches of publications directed to polypeptides and the use of those polypeptides would clearly be overlapping. This is so because in many, if not most, publications which describe polypeptides, these molecules are described by their function. Thus, a search of

polypeptide claims would also provide the Examiner with art directed to the manner in which the claimed polypeptides could be used to treat disease states.

In view of the above, Applicants submit that the searches for polynucleotides, polypeptides, antibodies, and methods of diagnosing and treating disease states using the proteins of the subject invention would clearly be overlapping. Accordingly, Applicants request that the Examiner reconsider and withdraw the restriction requirement and examine the subject matter of Groups I-X together in the present application.

Moreover, should the Restriction Requirement be made final, Applicants respectfully request that upon indication of allowable subject matter, the Examiner rejoin the claims of Group II with Group I (method of making polypeptides).

Applicants retain the right to petition from the restriction requirement under 37 C.F.R. § 1.144.

Conclusion

Applicants respectfully request that the above-made amendments and remarks be entered and made of record in the file history of the instant application. If there are any fees due in connection with the filing of this paper, please charge the fees to our Deposit Account No. 08-3425. If a fee is required for an extension of time under 37 C.F.R. § 1.136 that is not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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Janet M. Martineau (Reg. No. 46,903)
Attorney for Applicants

Human Genome Sciences, Inc.
9410 Key West Avenue
Rockville, MD 20850
(301) 315-2723 (phone)

KKH/JMM/JL/vr